Volume 7, Number 2

Apr/May/Jun 1996

# DAYTON '96

### BMHA Forum Program at HamVention is Set!

Co-Moderators for the BMHA Forum are Bob Pulhuj, KE8ZJ, and Ned Mountain, WC4X. They have assembled an excellent program for our seventh annual forum at Dayton.

The Dayton HamVention continues to be the annual gathering of BMHA members for the purpose of getting new ideas, renewing old acquaintances, and making new friends. This year's program, as usual, allows YOU to present your ideas to the group. Here are the details:

Date: Sunday, May 19, 1996

Time: 08:30 - 11:00 Location: Room 5

(Note that location is different from last year's.)

### The Program:

08:30 - 09:30: Informal gathering and discussions led by co-moderator Bob Pulhuj, KE8ZJ.

This is YOUR time to bring items of interest to others, with the common dual-interest of hamming and cycling. Bob will lead the discussion and act as a facilitator to insure an informative hour.

09:30 - 09:40: BMHA reminders and announcements. Club applications, dues, 20-meter net, etc.

09:40 - 10:00: "Cycling and Hamming Michigan's Beautiful Upper Peninsula"--Jim Kortge, NU8N.

Last summer, Jim participated in a very exciting ride and, as usual, HF radio went along.

10:00 - 10:20: "Computer Modeling of HF and VHF Antennas Mounted on Bicycles"---Russ Dwarshuis, KB8U. We are all painfully aware of mobile antenna inefficiencies, and Russ will show just how bad it really is when trying to radiate RF from our bikes!

10:20 - 10:40: "Safe Cycling and Fulfilling Your Ham
Obligations on Group Rides"
---Chris Charron, WBORSW.

Many newcomers, as well as old timers can use a reminder of safe riding guidelines, as well as how to make the best use of our special talents as hams when participating on group rides.

10:40 - 11:00: "HF Bicycle Mobile Show-and-Tell"

---Ned Mountain WC4X, Russ Dwarshuis KB8U, Jim Kortge NU8N.

Three HF bike setups at the same location? Yes, maybe a Guiness world record, and you can see 'em right here. Learn from the operators what works and what doesn't. All three set-ups have achieved world-wide communication while pedaling throughout North America. Hear actual tape recordings of HF DX contacts made from a bicycle!

Immediately after the Forum, follow the three HF bikers to the parking lot and see the rigs in operation. Then if your schedule permits, join the gang for an informal lunch at food tent #4---outdoors in the northeast part of the complex.

#### REMINDERS!

- Don't forget the BMHA Annual Bike Ride that starts in Tipp City at 14:00 on Saturday, May 18. Look for more details elsewhere in this issue.
- 2. Don't forget to monitor the BMHA frequency of 146.575 simplex for other BMHA members. Although this frequency (as well as the entire RF spectrum!) is borderline useless at Dayton, it does serve as a good calling channel for your fellow BMHA members.

For last-minute information contact: Ned Mountain, WC4X, at 770 518-5826, or E-mail to 100414.216@Compuserve.com.



ADVENTURE CYCLING

## BMHA's Fifth Annual Bike Ride

BMHA will again sponsor a bike ride in conjunction with the Dayton HamVention. The ride is set for 2 pm, Saturday May 18, at Tipp City Park. Ride participants can expect warmer weather for this ride, due to the later HamVention date this year.

Several routes of varying length (up to 30 miles) will be available. The routes ridden will depend on the number of riders (Continued on page 2)

#### (Continued from page 1)

and their preferences. All routes will be in and around Tipp City, which is about ten miles north of the HamVention. Please note that we plan to start promptly at 2 pm. You must be 18 or older to participate on the ride.

A picnic in the park will follow the ride. Ride participants who wish to take part in the picnic may choose to order a meal from a local restaurant. Persons ordering meals can expect to have them delivered to the park shortly before the ride is completed. A shelter will be available for eating and socializing, in case of inclement weather.

BMHAers who would like to attend the picnic but not take part in the ride are also welcome. There are trees in the park for those who may want to erect temporary antennas to operate portable, as well as areas where impromptu equipment demonstrations may be conducted during the ride and picnic.

Talk-in to the Tipp City Park prior to the start of the ride will be on 145.23 (-600), the Miami County A.R.C. repeater. Secondary communications, including intra-group communications during the ride, will be on 145.575 simplex.

Maps are available illustrating how to get from the HamVention to the Tipp City Park. To receive one, send an SASE to me by May 1. See you on the ride!

---Ken R. Noffsinger, AE81 43 Kent Road Tipp City, OH 45371

# PUBLIC SERVICE

Use of Ham Radio on Big Bike Tours

I serve as a bicycle-mobile ham communicator on two of Indiana's big bike rides: The Hilly Hundred (a two-day, 5,000 rider event), and the TRIRI (a seven-day, 500 rider tour). On both these rides we have demonstrated the ability of Ham Radio to reach help whenever needed. Cellular telephones are nice but who do you call when it is not a true medical emergency but you do need some help? Ambulance drivers and paramedics get so snooty when called to the scene of a bike accident where the people are not seriously injured, but the bike is in need of serious repair. Sometimes it seems the bike is more important to the biker than some body parts.

Additionally, I can never remember the road names, and lose the maps within the first ten miles of the ride. That would certainly make for an interesting call to 911. With Ham contact to others on the ride, a quick check of the mileage tells everyone where they are in relation to the problem, where the support vehicles are, and net control can direct the support vehicles to the correct location.

If the ride organizers will include the call signs on the fanny flags or other rider identification markers, then the BMHA members should willingly provide communications support. We'd get a little free publicity and thus more prospective Bike Mobile hams.

Here's a good example: every ham riding the Hilly Hundred, Southern Indiana's flattest (?) ride is told to check in with Barb Anderson, N9XSS, the Director of Communication for the Hilly. (The Hilly in the name is an advertising ploy developed by Hartley Alley, NAOA, who founded the Hilly Hundred way back in the 60's.) Officially-registered Bike Hams get a Volunteer T-shirt and fee courtesy, along with fanny tag recognition. Since most handy talkies scan, we use 146.64 MHz for official and emergency traffic; 146.52, 146.94, 147.18, and 444.9 for casual conversations. The local Ham club provides communication support at the ride headquarters, at fixed communication points along the route, and live Video (430 & 900 MHz mobile) to the ride HQ, then via video repeater to the three rest stops. Next year, live Bike Mobile Video! Come join the fun!

I suggest the BMHA start actively courting the organizers of bike tours. The primary goal being to offer our experience and expertise in solving their communication problems. The secondary goals being to promote Ham Radio and biking as compatible hobbies, and to recruit new members for BMHA.

See you down the log, or at the lunch stop!

---Dave Gerbig, WB9MZL 3504 Tremont Way Bloomington, IN 47401

Dave, thanks for the suggestion. We've moved ahead on your idea. We're in contact with the National Bicycle Tour Directors Association and will soon be sending info packages to the directors of 30 different cycling events. These are the big ones---the multi-day and cross-state tours. Several of these tours are of course already using ham radio communication. We'll see if our members can help improve their communication systems. As to those tours that have not used hams, we'll try to get the effort started. At this time, member Hank Blackstock, WA5JRH, is doing the ground work toward setting up ham communication for a famous cross-state ride: the 18th annual Oklahoma Freewheel, (whose catchy phrase is "Discover Oklahoma by the Seat of Your Pants"---I love it!)

We need help from those members who have provided communication for any sizable bike ride, whether you operated from your bike, from a sag vehicle, or from a fixed position.

Send us your suggestions, your experiences. You can just drop me a note or you can send in an article for this newsletter. We need your help.

----Harrley Alley, NAOA, Editor and Chairman

## Back Issues Still Available

You may purchase any of the twenty one back issues of the BMHA NewsLetter for \$1.50 each, postpaid. For info on the contents of the various issues send a #10 business-size SASE (self-addressed, stamped envelope) to: BMHA, POB 4009, Boulder CO 80306-4009, and ask for the Index of Back Issues. This service available to members only.

# GETTING STARTED

### Column conducted by Bil Paul, KD6JUI

In the last column I talked about how bicyclists might gravitate toward ham radio and what varieties of hamming were available for trips. This month I'll talk about ham licenses and HTs (handy-talkies, or walkie-talkies).

### Ham Licenses

First, you should know that to operate ham (amateur) radios, other than being a temporary guest operator under the guidance of a ham, you need to have a Federal Communications Commission (FCC) license. To operate a citizen's band radio, you don't need a license.

Ham radio might have been a hobby for only those of graying hair if it weren't for the no-code technician class of license, introduced in 1991. For the first time, an amateur radio license could be obtained without having to know the morse code (you do need to pass two relatively easy written tests). The morse code is kind of an initiation rite you need to submit to if you are to obtain the more advance ham licenses: General, Advanced, and Extra Class. However, the more you get into ham radio, the more likely you are to love morse code, as I do.

The no-code technician license gives you full ham privileges above 30 megahertz, including the frequency bands that most HTs use.

In the old days you had to take the exams at an FCC office, or, if you lived far enough away from an FCC office, a qualified ham could give you the test. Nowadays ham volunteers organized into accredited groups called Volunteer Exam Coordinators, or VECs, coordinate the tests in many sites around the U.S. For a small fee, they will administer any of the written and code ham tests.

The no-code tech license is easy to obtain, requiring that you basically read and understand exam-prep manuals that provide the exact questions and answers you will find on the exams. The other day I talked with a 10-year-old who'd just gotten his tech license. It's not much different than taking your written driver's test. You can find the prep manuals at any ham radio store or obtain them from the American Radio Relay League (ARRL).

To locate the VEC testing site closest to you, contact the ARRL, which is to ham radio what the AMA is to doctors. To reach the ARRL, call 1-800-326-3942, send e-mail to ead@arrl.org, or write to ARRL, 225 Main St., Newington CT 06111. All the VEC testing sites in the U.S. are listed on the ARRL's web site on the internet at http://www.arrl.org, under "amateur radio examination opportunities." The ARRL will be only too happy to send you complete information about becoming a ham along with a pitch about joining the organization.

Most ham exam sites allow you to just walk in and take the test without an appointment.

When you pass your tech written exams (and you'll find out whether or not you passed at the test session) you'll be issued a "call sign" by the FCC completely by chance. Later, if you upgrade to another class of license, you may be issued a different call sign. Ham call signs always include a number

representing a sector of the U.S. For example, a "6" represents California and a "7" represents several western states. U.S. call signs begin with the letters A, K, N and W. Current tech licensees are receiving calls beginning with K, moving up through the alphabet as more calls are issued. For example, I received the call KD6JUI in '92. Now, new licensees are moving up into the KF6 range in California.

In '92 I had to wait 6 weeks to receive my license and call sign in the mail. Now, many VECs can get you your FCC license and call sign electronically in a week or two.

### HTs-Handie-Talkie Radios

Usually running just several watts of power, most HTs are made in Japan. They start in the \$200 range for your basic Honda-Civic-like model and go up into the Lexus range. Lately, they've been getting smaller, though a smaller battery may mean reduced operating time. For a review of seven recent small-size models, see the May '96 issue of *QST*, the monthly magazine published by the ARRL.

Cycling gloves, for scale, show size of typical HT: Yaesu FT-411E.

HTs are available to cover the most popular repeater bands: 144, 220 and 440 megahertz (MHz). Of those bands, I44 MHz (usually called "2 meters," referring to wavelength) is the most popular. Some HTs cover more than one band. They come with small flexible antennas known as "rubber duckies," good for short-distance communications. For longer distances and operation from cars and behind obstructions you will want to upgrade to a better antenna.

What do you need on your first HT? What are the essential basics? Following is my laundry list:

- \* An electronic memory, to store different repeater frequencies and formats.
- \* Choice or low- or high-power operation.
- Provision for earphone, remote on-off and external microphone (allows you to use a boom-headset microphone/headset with in-line on-off switch with the HT while biking).
- \* Sub-audible tone settings (called PL) which are needed to access many repeaters.
- \* A numerical key pad for inputting numbers into the HT or for dialing up a telephone through a repeater.

(continued on next page)

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- \* Automatic scanning.
- \* Option of using external 12-volt battery power.
- Option of tuning outside the ham band to receive weather reports, etc.
- Should have a re-chargeable battery and recharging unit.
- \* I suggest buying an extra battery pack, whether rechargeable or for using alkaline batteries.

You can save money by buying a discontinued HT or a previous year's model. Perhaps the most convenient store selling ham HTs (usually only one model) is your local Radio Shack. Check ads in the common ham magazines such as QST, CQ and 73 for other companies' products. There are many Ham Radio Outlet stores around the U.S. carrying a profusion of HTs. Call 1-800-854-6046 for HRO store locations near you. There are of course many other ham radio stores as well.

After all this radio talk, it all boils down to the fact that HTs are fun. You can carry one around with you like a cellular phone — in your backpack, briefcase or purse. So get your license, buy your HT, learn how to use it, and get to know the hams on your local repeater. And learn how to use it in new locations on bike trips.

My next column will explain how repeaters work, about repeater directories and repeater etiquette. The column after that will deal with outfitting your bike for ham radio operation and how to make your own 2-meter bike antenna. If you have questions or suggestions write to me: Bil Paul, KD6JUI, 337 Estrella Way, San Mateo CA 94403-2940. My Email address: bilbee@aol.com.

## REMINDERS

## Your Bicycle Flies For Free!

As a member of BMHA you get free transport of your bicycle, when you fly on Northwest Airlines. You save \$90 on a roundtrip flight. For details call Wild World of Travel, Missoula MT, 1-800-735-7109. Mention that you're a network member of Adventure Cycling.

## Make Your Own "J" Antenna

As mentioned in the April '95 issue, Ken Wahrenbruck, KF6NC, has offered to provide detailed instructions for making his famous MOB Stainless "J" Antenna. This is the antenna used by over 40 members of the bicycling wing of the Downey (CA) ARC. Using this antenna on his bike, Ken can hit his base station when he's 100 miles from home—and using only 1.5 watts. You must specify whether you want plans for 144, 220, or 440 MHz. They're \$1 each, postpaid. Write to Ken Wahrenbrock, KF6NC, 9609 Cheddar St, Downey CA 90242. (This offer available to BMHA members only.)

When you write a plug for BMHA (and please do!) in your local club's newsletter, be sure to include this information: "The annual dues is \$10. To receive a sample copy of the BMHA Newsletter and other info send an SASE to BMHA, Box 4009-RC, Boulder CO 80306." This will save our club a lot of trouble and expense.

## **NEW HAMS**

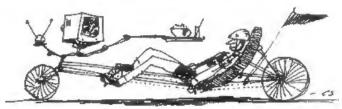
### Four More Members Now Have Tickets!

They hit the books, sweated, and got nervous at the exam site—just as we all did. But they passed! Since the last issue these members have become licensed hams:

Carol DeVoe WL7CRE, Fairbanks, Alaska
Dave DeVoe, WL7CRD, " "

June Johnson, KBOVST, Fargo, North Dakota
Roger Johnson, KBOVSS, " "

Non-ham BMHAers, please send in your call sign as soon as you get your FCC amateur radio license. We'd like to list you in this column. If you have time, tell us how and what you studied, what helped you to pass the test. We'll pass it on to our non-ham members who are thinking about taking the exam.



-ADVENTURE CYCLING

# **NEW MEMBERS**

We're pleased to add these names to our Membership List:

Robert Blanchard, KC8CGY, 1843 Willoway Cir, Columbus OH 43220 Joanne Clapp Fullagar, KF6AFY, 401 Maitland Dr, Alameda CA 94502 Ron Crown, KA9JCP, 3050 S. 93rd St, West Allis WI 53227 Carol DeVoe, WL7CRE, 6315 Abraham Rosd, Fairbenks AK 99709 David DeVoe, WL7CRD,

June Johnson, KBOVST, 2843 Longfellow Road, Fargo ND 58102 Roger Johnson, KBOVSS, " "
Dwight Jones, KO6FE, 25672 Huron, Lorna Linda CA 92354
Bill Larson, KGOXW, 4335 E. San Miguel Cir, Colo Spgs CO 80915
Arvid S Lundy, 1183 San Ildefonso, Los Alamos NM 87544

Bob Myers, N9OGS, 113 Home Drive, DeKalb IL 60115
Dick Nelson, 754 Newport Circle, Redwood City CA 94065
Clay Pace, WA6FDF, 923 Aileen St, Oakland CA 94608
Robert J Simpson, KA3ZLA, 2563 Ebbvale Rd. Manchester MD 21102
L Sherman Wilkinson, KB0QPW, POB 1235, St. Joseph MO 64502

With traditional ham friendliness, make contact with these new members, welcome them to BMHA, and help them with any problems they might have.

New members June, KBOVST, and Roger, KBOVSS, Johnson have bicycle-toured in New Zealand, Portugal, Austria, and Hungary. If you're planning a trip to those countries, and would like more info, you'll find their address above, in the NEW MEMBERS list. ——Ed.

# NOTE PAD

BMHA'er Gets Published in QST

Make sure you look at page 50 of the current (April '96) issue of your *QST*. There you'll find a excellent piece by our **Bil Paul**, **KD6JUl**, about the bike tour of the Pacific Crest Bicycle Trail, a trek he leads every summer. Nice going, Bil!

Looking thru the February '96 QST I found a piece of great interest to our members who provide communication for bicycle tours and events. The article "Hams at the New York City Marathon", p. 27, tells how 400 hams provide radio coordination for all the vehicles, medical units, street-side marshals, etc. that serve 30,000 runners. The overall director of the race says: "It would be hard to run the New York City Marathon without Amateur Radio. No other communications medium allows one individual to speak efficiently with five, ten or even more people at the same time."

#### Writers Wanted!

We always need manuscripts on these subjects:

Antennas. Our readers have shown more interest in this department than any other. Antenna homebrewers, please notice.

Travel and Adventure. Always looking for stories about long (or short) bike trips. Especially, instances where ham radio took care of much-needed emergency communication; instances where local hams offered overnight accommodations or helped you out of a tight spot; cycling trips in foreign countries.

If you'd like to write on these topics, send me a brief outline. Or just sit down and bat it out and send in the completed article. Send it on a disc (Aschi) and we'll love ya!

#### Needed! Crew Members for RAAM

(Ride Across AMerica) August '96

Our 70-PLUS riding team is set. But we still need non-riding crew members. Must be over age 25 and available for two weeks of aiding our riders. For info contact: Joe Walker,

Box 17867, Encino, CA 91416-7867, Fax: 818-774-9023.

New members June, KBOVST, and Roger, KBOVSS, Johnson have bicycle-toured in New Zealand, Portugal, Austria, and Hungary. If you're planning a trip to those countries, and would like more info, write to them at 2843 Longfellow Rd., Fargo ND 58102.

--- Hartley Alley, NAOA, Editor

# BMHA NET...ON 20

TIME: 2000 UTC and four hours later at 0000 UTC.

DATE: 1st and 3rd Sunday of each month. FREQ: 14.253 -- plus or minus the QRM.

Look for me, NF0N, at those times, and if I'm unable to call the net please look for those who have picked up the net when I've been out of town. In particular, look for Assistant Net Controls Jim Kortge, NU8N, and John Liebenrood, K7RO. Jim covers the East, John covers the West, and I cover the middle.

----Mike Nickolaus, NFON, BMHA Net Control 316 E. 32nd St.

S. Sioux City, NE 68776

#### **BMHA NEWSLETTER**

Editor: Hartley Alley, NAOA

Associate Editor: Assistant Editor: Skip LaFetra, AA6WK Bil Paul, KD6JUI

Board of Advisors:

Russell Dwarshuis, KB8U Len Koppl, KD0RC Mike Nickolaus, NF0N Bob Pulhuj, KE8ZJ Chairman and Founder: Hartley Alley, NA0A

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We welcome articles, suggestions, letters, announcements, photos, artwork — anything pertaining to bicycling while operating an amateur radio, or vice versa.

Submitted material will be edited for clarity and, if necessary, shortened to fit space constraints. Material should be submitted before Mar 1, June 1, Sept 1, or Dec 1 for inclusion in the ensuing issue.

BMHA NEWSLETTER, a quarterly publication of the Bicycle Mobile Hams of America — Jan, Apr, July, Oct.

TELEPHONE: 303-494-6559

BICYCLE MOBILE HAMS OF AMERICA (BMHA)

Box 4009, Boulder, CO 80306-4009

# **ABOUT BMHA**

## For the information of our first-time readers

Bicycle Mobile Hams of America got its start when a 'Stray' in the June '89 QST magazine asked to "get in touch with hams who operate their radios while bicycle-mobile, or while in any other human-powered conveyance", signed by Hartley Alley, NAOA. Twenty five hams responded, filled out questionnaires, and received a summary of the collected data.

In April of '90 we had our first BMHA Forum at the Dayton HamVention. We played to a packed house, overflowed the room, and added 54 names to our mailing list. Our five subsequent forums have drawn increasingly larger audiences, and now BMHA is firmly established as a 'regular' at this world-renowned event.

This is the twenty-third issue of our quarterly newsletter, which has become the clearing house for the exchange of info and ideas for the hams who go on the air from their bicycles. Since the last issue of this newsletter we have added 15 new members. The total membership now stands at 445, with members in 43 states, and six countries.

BMHA membership puts you in touch with a friendly and helpful group of bike-riding hams. You'll make contacts through our membership directory, packet and E-mail address lists, bi-weekly net on 20 meters, annual meeting and Forum at the Dayton HamVention and other regional meetings, and of course through the BMHA NewsLetter, which has articles on bike trips, antennas, other gear, operating tips, etc. Membership application blank on the next to last page.

# THE WORLD OF HF

Bike-Mobe Station Really Gets Out!

While operating bike-mobile on just six afternoon rides I've made radio contact with 14 countries and 25 states. I've broken into DX pileups, and I've been called by many stations who "want to make a bicycle-mobile contact"—all this with a setup that fits in my handlebar bag, and cost me only \$305!



Controls within easy reach, the MFJ rig sits happily in Wayne's handlebar bag.

My Setup

The HF Bike-mobile setup on my Trek 520 bicycle consists of:

- MFJ-9420 20-meter SSB Travel Radio (2 lb.)
  - ----in handlebar bag
- 14.4V, 3 Amp-hr NiCd battery (3 lb.)
  - ----in handlebar bag
- \* 8 ft. 'Hamstick' vertical and homemade mount (2.5 lb. total)
  - ----on the rear rack
- \* 6 ft. of RG-58 coax and a coax angle adapter
- \* PIT switch on the handlebars
- \* Icom HS-10 headset taped into helmet

I think the MFJ 9420 is (almost) the ideal HF bike mobile rig. It costs only \$200, weighs only 2 pounds, and the current drain is only 100 ma on receive and 1.8 A on transmit for 12 watts output. My second choice would be the TenTec Scout which is heavier, more expensive, and draws 800 ma on receive, but offers the option of changing bands. The best feature of the MFJ 9420 is the speech processor which really works as advertised! I get surprisingly good signal reports and frequent compliments about the transmit audio quality.

**Equipment Construction and Modifications** 

I only use the headset part of the Icom HS-10 headset (no VOX/PTT switch box). I built an adapter cable with an inline 1/8 inch jack on one end that mates with the headset plug. The other end of the cable is a 5-pin DIN connector which mates with the radio. The PTT switch cable is also wired to the DIN connector. I installed a headphone jack on the back of the radio, connected in series between the audio amplifier and one side of the speaker. You must add a 470 uF capacitor between the amplifier and the headphone jack.

I normally keep a 'dummy' plug (no wires connected to the plug) in the headphone jack to disconnect the radio's internal speaker. I connected the unswitched side of the headphone jack to pin 5 of the microphone connector. Be sure to disconnect pin 5 of the microphone connector from ground or you may blow up the audio amplifier. You will also need to disconnect pin 5 from ground inside the MFJ hand microphone if you ever plan to use it. The radio has a DC-coupled bridge audio amplifier so you must AC-couple the headset and headphone jack to only one side of the bridge amplifier to avoid grounding the output of the bridge amplifier.

My PTT switch is from a Performance Bicycle Shop electronic horn, which I bought for \$20, just to get a waterproof quick-disconnect handlebar switch. The only other decent switch I could find was a motorcycle PTT switch for \$50 from Motorola.



With 8-foot ant in place, Wayne sets off for a DX session.

My Hamstick antenna is mounted on a 6x9x1/16 inch aluminum plate. The 3/8x24 to SO-239 bulkhead mount is installed in the center of the plate. Each corner of the plate is attached to the top of the rack with the U-bolt portion of a 3/8 inch cable clamp. The plate is mounted off-center to keep the coax from rubbing against the tire. My antenna mount is not compatible with a rack trunk, but could be if the antenna mount was closer to the rear of the plate. I opted for the mounting plate because it is stronger and cheaper than a clamp-on truck mirror or trunk lip mount. I was concerned that a clamp-on mount would bend the rack when the stiff 8 ft. antenna encounters tree branches. But no problem: my mount distributes the forces widely over the top of the rack.

#### Low Cost

My system only cost me \$305, because I already had some 7.2V, 3-Amp-hr NiCd batteries and a rapid charger. I use two of these to get 14.4V, which gives the radio more output power than with a lead-acid battery, which is usually less than 13V. My 3-Amp-hr battery is overkill for a typical bike ride. Each charge should give me 10 hours of receive and 2 hours of transmit (I've never run the battery all the way down). The total cost of my setup is summarized below:

\$217 MFJ-9420 SSB 20 m Travel Radio

- 40 Icom HS-10 headset (no VOX/PTT box)
- 20 PTT switch from Performance electronic horn
- 16 Hamstick 20 m. mobile antenna
- 7 3/8x24 to SO-239 bulkhead antenna mount, and four 3/8" U-bolts
- 6 PL-259 connector, 3-conductor headset jack, and a 5-pin DIN plug (all at Radio Shack)
- Junkbox parts: aluminum plate, coax cable, headphone jack/plug, 470 uF capacitor, coax angle adapter
- 0 Batteries and charger (hamfests have the best deals!)

#### **Operation Comments:**

The performance of this setup has greatly exceeded my expectations. In six afternoon rides in Northeastern Illinois, I have contacted 25 states and 14 countries. The antenna, PTT switch, and headset work great. With my hands on the brake hoods, I press the PTT switch with my left thumb and can brake with my fingers at the same time. Despite traffic noise I get frequent compliments about the TX audio quality. With a screwdriver adjustment on the back of the radio, I reduced the compressor gain from the 'factory' setting to prevent road noise from being too obnoxious.

The 10.5 foot high antenna does hit tree branches now and then, but no big deal. The radio stays on frequency during the shock and vibration of riding as long as the cover of my handlebar bag doesn't brush against the tuning knob. The radio is held snugly in the handlebar bag by pieces of open-cell foam. The receiver selectivity is marginally acceptable (you get what you pay for).

I have two problems which I hope to solve soon:

1. The tuning knob covers 50 kHz per revolution, so tuning is VERY touchy. It is almost impossible to get optimum SSB tuning unless I'm on an extremely smooth road. I want to build a mechanical speed reducer to solve this problem.

2. I have to stop to write down callsigns, names, locations, time,

Age Most miles bicycled in one day

etc. I plan to use a microcassette recorder for log information and use an erasable plastic "refrigerator" notepad on the handlebar bag to remind me of names and callsigns.

Bike Ham Popular on DX

My first transatlantic contact was with YU1KW (Yugoslavia) who returned with a 58 signal report on my first call! I've had a bit of luck in DX pileups when a stateside 'kilowatt and beam' station hears me, works the DX station, and then tells the DX station to listen for the bicycle mobile station that's calling. I inadvertently broke in to the 14.226 DX net by saying "bicycle mobile" during a quiet moment. The DX station in Alderney (Channel Islands, UK) heard me and asked for the bike mobile station to come back. Most stations are quite amazed that it is possible (or sane?) to do HF bike mobile. Half the time when I finish a QSO, another station calls me and says "I want to work a bicycle mobile too!". But then there was OS5CD in Belgium who said I was NOT his first HF bike mobile contact. At least I was the first HF bicycle mobile contact for N5EV, aeronautical mobile over the Atlantic Ocean.

I ride alone most of the time, so HF bike mobile is a nice diversion. Next year I want to take the setup with me on some organized mass rides (with a bunch of QSL cards to pass out). Someday I would like to work all states (WAS) bicycle mobile. Maybe BMHA could persuade the ARRL to add 'bicycle mobile' endorsements to the WAS and DXCC awards!

I think my HF bike mobile setup gets out just as well as my home station which runs 100 watts into a 33 foot vertical. On the bike I can ride to hilltops or clear areas with better propagation and less power line noise than my home QTH. Sometimes I think the phrase 'bicycle mobile' is good for a couple S-units of attention. HF bicycle mobiles are rare, which is the next best thing to being 'rare DX'!

I would be glad to help anyone who wishes to contact me for advice about building a bike mobile HF station. If anyone has successfully solved tire/hub RF noise problems, please write an article about this subject for the BMHA newsletter.

---Wayne Estes WD5FFH 727 E. Maple Ave. Mundelein, IL 60060 (708) 566-6521

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### BMHA NEWSLETTER

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# COMMENTS

....We'd like to QSO with and meet BMHA'ers while cycling the Northern Route, Maine to Washington, this summer—May 22 to August 30. Our 13 year-old grand-daughter will be riding with us. We'd be happy to correspond with BMHA members about cycling in Alaska. In addition, we've driven the Alaska Highway numerous times, and have a fair idea of what it would be like to cycle it. Write to us at 6315 Abraham Rd, Fairbanks, Alaska, 99709.

### ---Carol (WL7CRE) and Dave DeVoe (WL7DRD), Fairbanks, Alaska

....I just recently became a ham when I passed my Technician test. I am now KB8ZQW and proud of it! I am also a long time bike rider. I combined the two hobbies by mounting my Yaesu HT and a power pack on my bike. I had heard of the BMHA but just now found your address. I would like to get the information necessary for me to join up. I have already had a lot of fun using the rig and would like to be aware of all the tricks of the trade, which I'm sure BMHA would provide.

----Walt Smith, KB8ZQW, Harrison, OH

....My call is KK5OK, advanced class, issued 05/17/95. An earlier call was KC5NMM, Tech+, issued 03/27/95. As you see, I moved out of that tongue-twister as soon as I could. Many years ago, in 1941, I got a "class B" ham ticket. After WW2, in 1946, I was issued a new license, W5MCC, (soon called General instead of class B). However, it expired in 1956; as I

was living and working overseas in a country without reciprocal permits. I'm telling you all this, since you may be wondering how I went from no license to advanced class in 6 weeks. It really took me more like 50 years! I suppose the fact that my father was an active ham (CW only for him) W2PQP, until he died in 1983, and that both of my sons have ham licenses, prodded me to become licensed again.

Last summer I biked from Topeka, KS to Blackwell, OK, about 250 miles, taking an HTX-202, using a 1/4 wave helical or a 1/2 wave MFJ linear antenna. Power supply was 9V (AA batts.) giving me about 4 watts RF. Results were fair; with more expertise things will improve.

---- Harold J. Gillespie, KK5OK, Houston, TX

....(from his BMHA Questionnaire) Most exciting bicycling adventure? Riding from Hanoi to Saigon with the Cycle Vietnam group in Jan. '94.

----Wilfred S. Kearse, Jr., San Antonio, TX

....I read about your organization in a catalog from Bicycle Exchange of Woodbridge, VA. I own a road bike and commute eight miles to and from work 3 or 4 times a week. On weekends I try to do at least a 20 mile trip, preferring to do a 50-miler.

My radio is a Heath HW24HT (made by Standard). My current plans are to build a boom mike and small earpiece for it and mount a PTT button on the left side of the handlebar. I was going to make a small clamp on which to mount a BNC connector for connection to a 5/8 wave 2M antenna. Any advice on these plans would be greatly appreciated.

----Jerry K. Nobles, Dunfries, VA